urements should be included in the physical examination of all children 3 years old and older as part of their continuing health care. These measurements should be plotted on grids. In a child in whom levels exceed the 95th percentile on four occasions, evaluations should be done taking into account the parents' history (hypertension or its complications), the health and blood pressure levels of siblings, the patient's history and findings on physical examination of the patient. Guidelines for pharmacotherapy in stepped graduations are provided.

Finally, the *Plan for Hypertension Control for the State of California,* adopted in 1976, includes a segment dealing with children and adolescents. Further information can be obtained from Dr. Harold Mozar, Chief, Chronic Disease Control Section, State of California Department of Health.

ELLIN LIEBERMAN, MD

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Hypothyroid Screening of Newborns

CONGENITAL HYPOTHRYOIDISM probably is the most frequently occurring, preventable, congenital cause of mental retardation. Its incidence, about one in 5,000 births, is about twice that of phenylketonuria—which already is subject to mandatory newborn screening. Screening programs in North America have screened about 700,000 newborns and detected permanent congenital hypothyroidism in 166 of them; thyroid dysgenesis was found in 85 percent of the 166, inborn defects in thyroid hormonogenesis in 10 percent and hypothalamic-pituitary hypothryoidism in 5 percent. In only seven of the 166 infants was the condition suspected on clinical grounds before six weeks of age. Most of the screening programs now are testing filter paper blood spots (as used for phenylketonuria screening) for thyroxine content by radioimmunoassay and following this with a thyrotropin content radioimmunoassay on samples with the lowest 3 percent of thyroxine values. Infants with a low blood thyroxine level and a high thyrotropin level are recalled immediately for serum testing and treatment.

Infants with the lowest 1 percent of thyroxine values and low thyrotropin levels are retested at six weeks or the physician of record is notified of the low thyroxine and thyrotropin values—which may indicate prematurity, low serum thyroxine binding globulin level or hypothalamic-pituitary hypothyroidism.

Treatment of involved infants now is begun within four weeks of birth. Evaluation and preliminary IQ testing of treated newborns (after 12 months of treatment) suggests normal development. The cost of the program is $1 to $2 per infant screened, or $5,000 to $10,000 per infant in whom congenital hypothyroidism is detected. Without early diagnosis and treatment, special education is required in about 70 percent of hypothyroid infants at an estimated cost of $30,000 per infant, and prolonged custodial care is required in 20 percent.

Newborn screening programs for congenital hypothyroidism, therefore, are effective in detection of the disorder and facilitation of early treatment, and are cost effective. Preliminary information suggests that early treatment prevents mental retardation and minimizes the impact of congenital hypothyroidism on public budgets for care and rehabilitation of the mentally handicapped.

DELBERT A. FISHER, MD

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The Lung Profile: Fetal Lung Maturity

FINDINGS FROM recent studies have shown that the maturity of the lungs in a fetus can be determined using various measurements of phospholipid indicators in amniotic fluid. These phospholipids originate from surfactant produced in fetal lungs and are secreted into amniotic fluid during gestation. They include lecithin and sphingomyelin (as the L/S ratio), the percentage of disaturated lecithin (which increases during gestation to 50 percent at maturation and as high as 70 percent at term), and percentages of two acidic phospholipids, phosphatidyl inositol and phosphatidyl glycerol. These latter two phospholipids